Hurricane™ 1800 Flex

Snapshot

OK on Dimmer	⊘
Outdoor OK	⊘
Sound Activated	⊘
DMX	✓
Master/Slave	⊘
115 V / 230 V Switchable	⊘
Resettable breaker	✓
User Serviceable	⊘
Duty Cycle	⊘

USER MANUAL



CHAUVET
Value · Innovation · Performance

3000 N 29th Ct, Hollywood, FL 33020 U.S.A.
(800) 762-1084 – (954) 929-1115
FAX (954) 929-5560
www.chauvetlighting.com

TABLE OF CONTENTS

1. BEFORE YOU BEGIN

What is included

- 1 x Hurricane™ 1800 Flex
- Warranty Card
- User Manual

Unpacking Instructions

Immediately upon receiving a fixture, carefully unpack the carton, check the contents to ensure that all parts are present, and have been received in good condition. Notify the shipper immediately and retain packing material for inspection if any parts appear damaged from shipping or the carton itself shows signs of mishandling. Save the carton and all packing materials. In the event that a fixture must be returned to the factory, it is important that the fixture be returned in the original factory box and packing.

AC Power

To determine the power requirements for a particular fixture, see the label affixed to the back plate of the fixture or refer to the fixture's specifications chart. A fixture's listed current rating is its average current draw under normal conditions. All fixtures must be powered directly off a switched circuit and cannot be run off a rheostat (variable resistor) or dimmer circuit, even if the rheostat or dimmer channel is used solely for a 0% to 100% switch. Before applying power to a fixture, check that the source voltage matches the fixture's requirement. Check the fixture or device carefully to make sure that if a voltage selection switch exists that it is set to the correct line voltage you will use.

Warning! ***Verify that the voltage rating on your unit matches the line voltage applied. Damage to your fixture may result if the line voltage applied does not match the voltage rating. All fixtures must be connected to circuits with a suitable Earth Ground.***

Safety Instructions

Please read these instructions carefully, which includes important information about the installation, usage and maintenance of this product.

- Please keep this User Guide for future consultation. If you sell the unit to another user, be sure that they also receive this instruction booklet.
- Always make sure that you are connecting to the proper voltage, and that the line voltage you are connecting to is not higher than that stated on the decal or rear panel of the fixture.
- This product is intended for indoor use only! To prevent risk of fire or shock, do not expose fixture to rain or moisture.
- Make sure there are no flammable materials close to the unit while operating.
- The unit must be installed in a location with adequate ventilation, at least 20 in (50 cm) from adjacent surfaces. Be sure that no ventilation slots are blocked.
- Secure fixture to fastening device using a safety chain. Never carry the fixture solely by its head. Use its carrying handles.
- Maximum ambient temperature (Ta) is 104° F (40° C). Do not operate fixture at temperatures higher than this.
- In the event of a serious operating problem, stop using the unit immediately. Never try to repair the unit by yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center.
- Never connect the device to a dimmer pack.
- Make sure the power cord is never crimped or damaged.
- Never disconnect the power cord by pulling or tugging on the cord.

Caution! ***There are no user serviceable parts inside the unit. Do not open the housing or attempt any repairs yourself. In the unlikely event your unit may require service, please contact CHAUVET® at: 954-929-1115.***

2. INTRODUCTION

Features

- 1-channel DMX-512 flexible fog machine

Additional Features

- Manually adjustable output angles (180º)
- 3-pin and 5-pin DMX connections
- Wired timer remote included
- Manual fog button
- 5L tank capacity
- 10 minute heat up
- Low fluid indicator and auto shut down
- LED-illuminated tank
- Water-based fogger

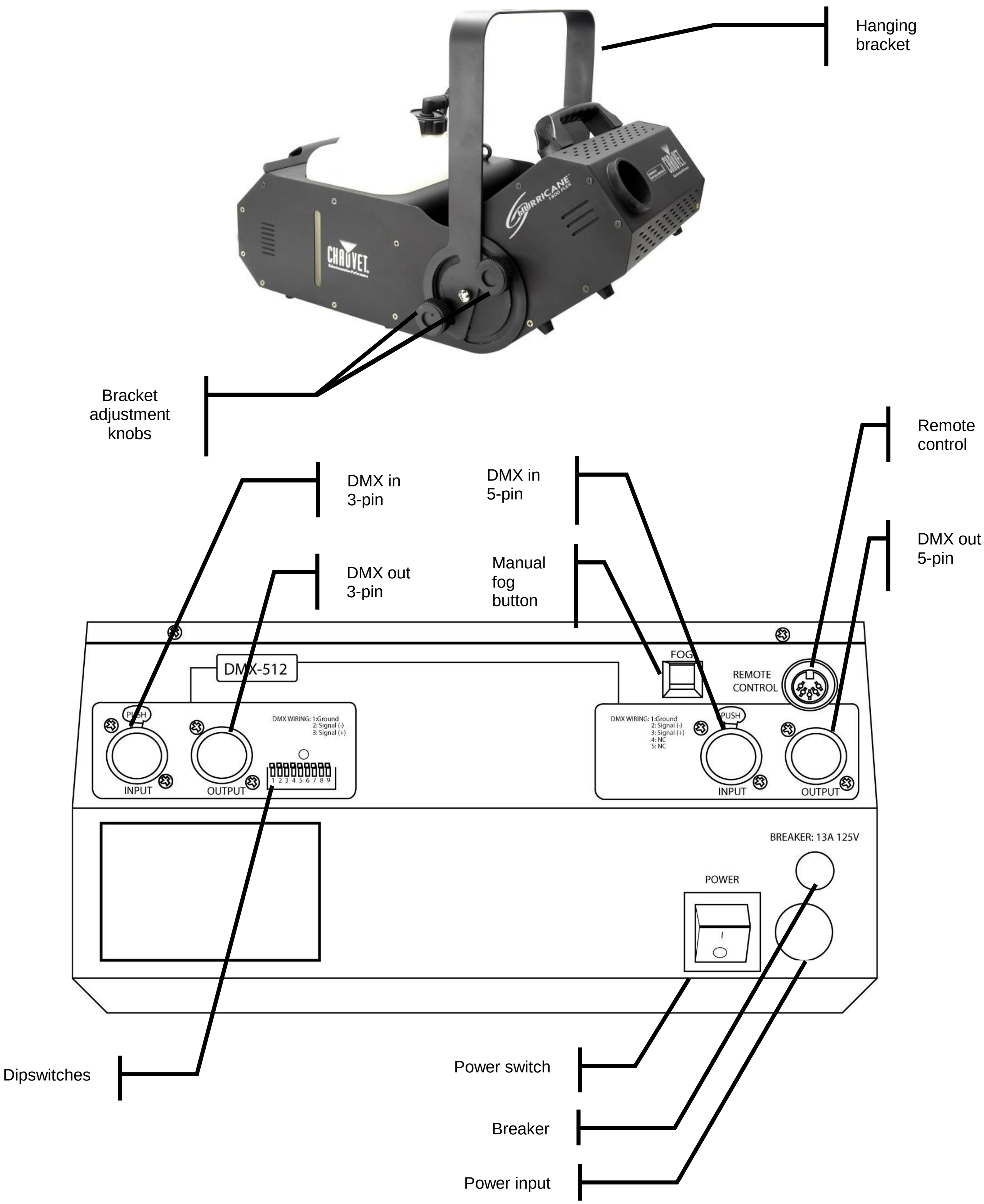
OPTIONS

- Wireless remote (FC-W)

DMX Channel Summary

CHANNEL	FUNCTION
1	Fog output

Product Overview



3. SETUP

> Disconnect the power cord before resetting the breaker. *Note: the breaker will not reset until it has been allowed to cool.*

Breaker Reset

This product is equipped with a breaker on the main power input, located on the exterior of the back panel. In the event that this breaker trips, you may reset it very easily.

1. Unplug the product from the mains power.
2. Allow to cool for 5-15 minutes.
3. Using your hand, press on the button for the breaker, until it remains in place.
   - *Note: In the event that this breaker will not reset, contact CHAUVET® for troubleshooting. The fixture may need to be serviced.*

Fixture Linking

You will need a serial data link to run light shows of one or more fixtures using a DMX-512 controller or to run synchronized shows on two or more fixtures set to a master/slave operating mode. The combined number of channels required by all the fixtures on a serial data link determines the number of fixtures the data link can support.

Important: Fixtures on a serial data link must be daisy chained in one single line. To comply with the EIA-485 standard no more than 32 devices should be connected on one data link. Connecting more than 32 fixtures on one serial data link without the use of a DMX optically-isolated splitter may result in deterioration of the digital DMX signal.

Maximum recommended serial data link distance: 500 meters (1640 ft.)
Maximum recommended number of fixtures on a serial data link: 32 fixtures

Data Cabling

To link fixtures together you must obtain data cables. You can purchase CHAUVET® certified DMX cables directly from a dealer/distributor or construct your own cable. If you choose to create your own cable please use data-grade cables that can carry a high quality signal and are less prone to electromagnetic interference.

DMX DATA CABLE

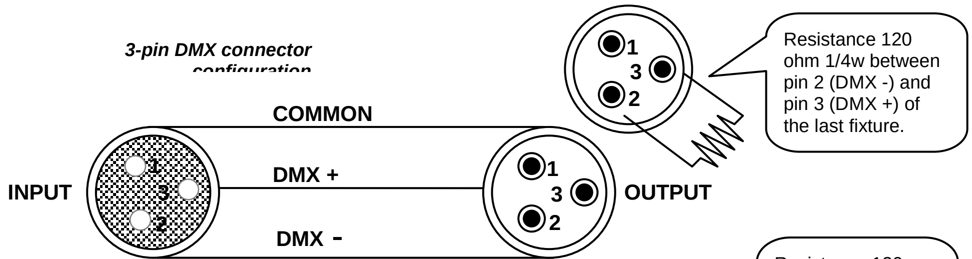
Use a Belden© 9841 or equivalent cable which meets the specifications for EIA RS-485 applications. Standard microphone cables cannot transmit DMX data reliably over long distances. The cable will have the following characteristics:

2-conductor twisted pair plus a shield
Maximum capacitance between conductors – 30 pF/ft.
Maximum capacitance between conductor and shield – 55 pF/ft.
Maximum resistance of 20 ohms / 1000 ft.
Nominal impedance 100 – 140 ohms

CABLE CONNECTORS

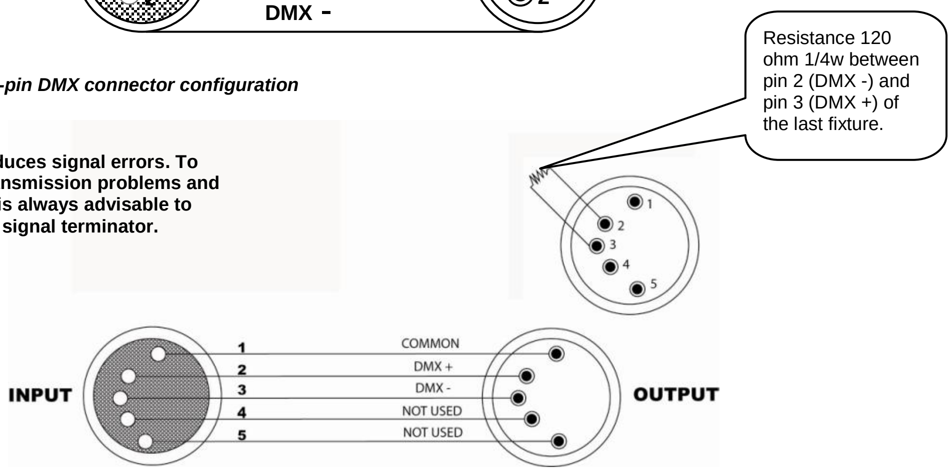
Cabling must have a male XLR connector on one end and a female XLR connector on the other end.

3-pin DMX connector configuration



5-pin DMX connector configuration

Termination reduces signal errors. To avoid signal transmission problems and interference, it is always advisable to connect a DMX signal terminator.



CAUTION Do not allow contact between the common and the fixture's chassis ground. Grounding the common can cause a ground loop, and your fixture may perform erratically. Test cables with an ohm meter to verify correct polarity and to make sure the pins are not grounded or shorted to the shield or each other.

3-PIN TO 5-PIN CONVERSION CHART

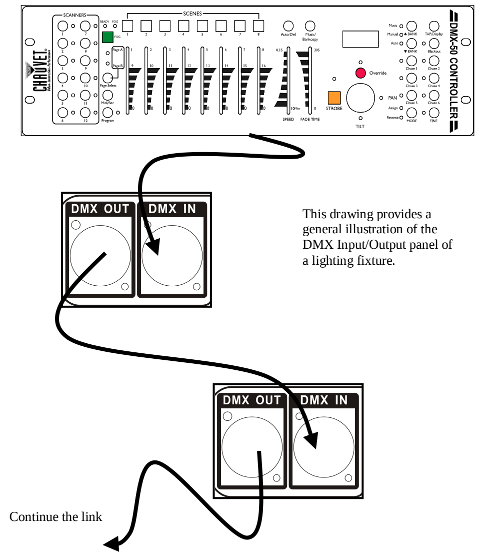
Note! If you use a controller with a 5 pin DMX output connector, you will need to use a 5 pin to 3 pin adapter. The chart below details a proper cable conversion:

3 PIN TO 5 PIN CONVERSION CHART

Conductor	3 Pin Female (output)	5 Pin Male (Input)
Ground/Shield	Pin 1	Pin 1
Data (-) signal	Pin 2	Pin 2
Data (+) signal	Pin 3	Pin 3
Not Used		Pin 4
Not Used		Pin 5

Setting up a DMX Serial Data Link

Universal DMX Controller

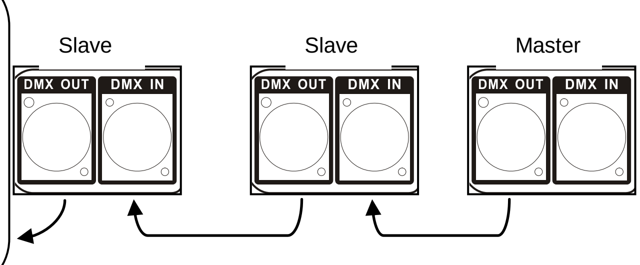


1. Connect the (male) 3 pin connector side of the DMX cable to the output (female) 3 pin connector of the controller.
2. Connect the end of the cable coming from the controller which will have a (female) 3 pin connector to the input connector of the next fixture consisting of a (male) 3 pin connector.
3. Then, proceed to connect from the output as stated above to the input of the following fixture and so on.

Master/Slave Fixture Linking

1. Connect the (male) 3 pin connector side of the DMX cable to the output (female) 3 pin connector of the first fixture.
2. Connect the end of the cable coming from the first fixture which will have a (female) 3 pin connector to the input connector of the next fixture consisting of a (male) 3 pin connector. Then, proceed to connect from the output as stated above to the input of the following fixture and so on.

Often, the setup for Master-Slave and Standalone operation requires that the first fixture in the chain be initialized for this purpose via DIP switches. Secondarily, the fixtures that follow may also require a slave setting. Please consult the "Operating Instructions" section in this manual for complete instructions for this type of setup and configuration.



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Mounting

ORIENTATION

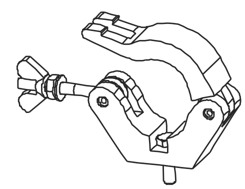
This fixture may be mounted in a 90° degree angle (horizontal), provided there is adequate room for ventilation. The tank of the fixture should not move from this position. However, the front portion of the fog machine can tilt up and down in the desired direction. This is secured by using the bracket adjustment knobs.

RIGGING

It is important never to obstruct the fan or vents pathway. Mount the fixture using, a suitable “C” or “O” type clamp. Adjust the angle of the fixture by loosening both knobs and tilting the fixture. After finding the desired position, retighten both knobs.

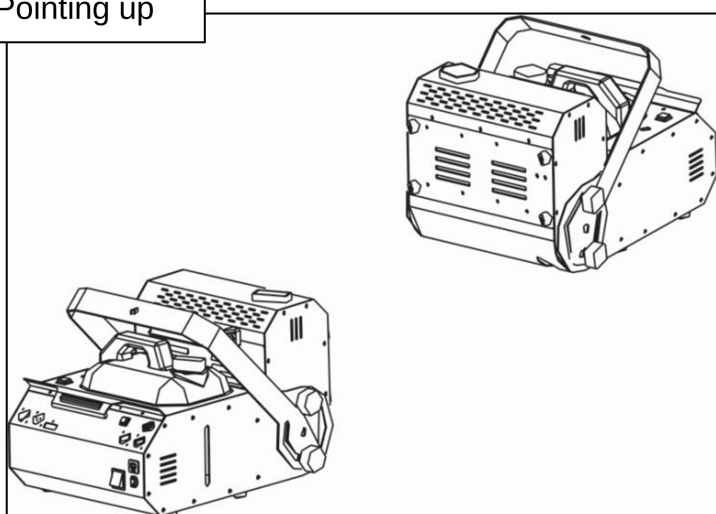
- When selecting installation location, take into consideration fluid tank access and routine maintenance.
- Safety cables must always be used.
- Never mount in places where the fixture will be exposed to rain, high humidity, extreme temperature changes, or restricted ventilation.

Hanging Clamp

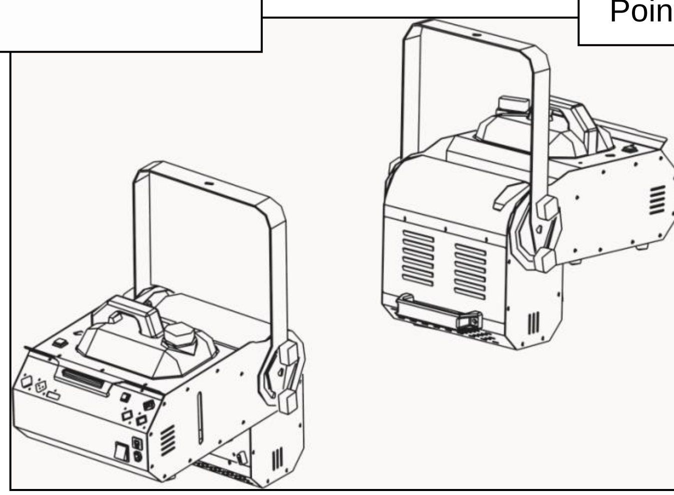


Note!
Clamp is sold separately.

Pointing up



Pointing down



4. OPERATING INSTRUCTIONS

Operation

DMX Mode

This mode allows the unit to be controlled by any universal DMX controller. If you are unfamiliar with DMX, please read the DMX Primer in the Appendix of this manual.

1) This fixture will automatically switch to DMX mode operation, once a DMX controller has been plugged into the 3-pin or 5-pin DMX input.
2) Use DIP switches 1~9 to set the DMX address.

DMX Channel Values

CHANNEL	VALUE	FUNCTION
1		**Fog output**
	000 ⇔ 005	No function
	006 ⇔ 255	Fog output 0%~100%

Auto cut-off feature

This product has an auto cut-off safety feature to keep the machine from becoming damaged. This is referring to the operation of the pump. When the fluid tank is empty, the pump will still operate for a short period of time, until all of the fluid has been removed from the system. Then, it will sense that there is no fluid, and will automatically stop the fog output. An indication that this has occurred is when the blue LED's that are lighting the fluid tank are flashing.

Note: it will take approximately 30 seconds to 1 minute for this feature to engage once the fluid has emptied form the tank.

Note: In order the fog machine to automatically reset, the trigger must be released. This may be from the wired remote, wireless remote, the manual fog button on the unit, or via a DMX controller. If it is via a DMX controller, then the DMX channel will have to be brought to a value of 000 (0%) in order to allow the fog machine to reset itself.

Note: once the tank has been refilled with fog fluid, you may resume using the fog machine. The auto cut-off will automatically reset.

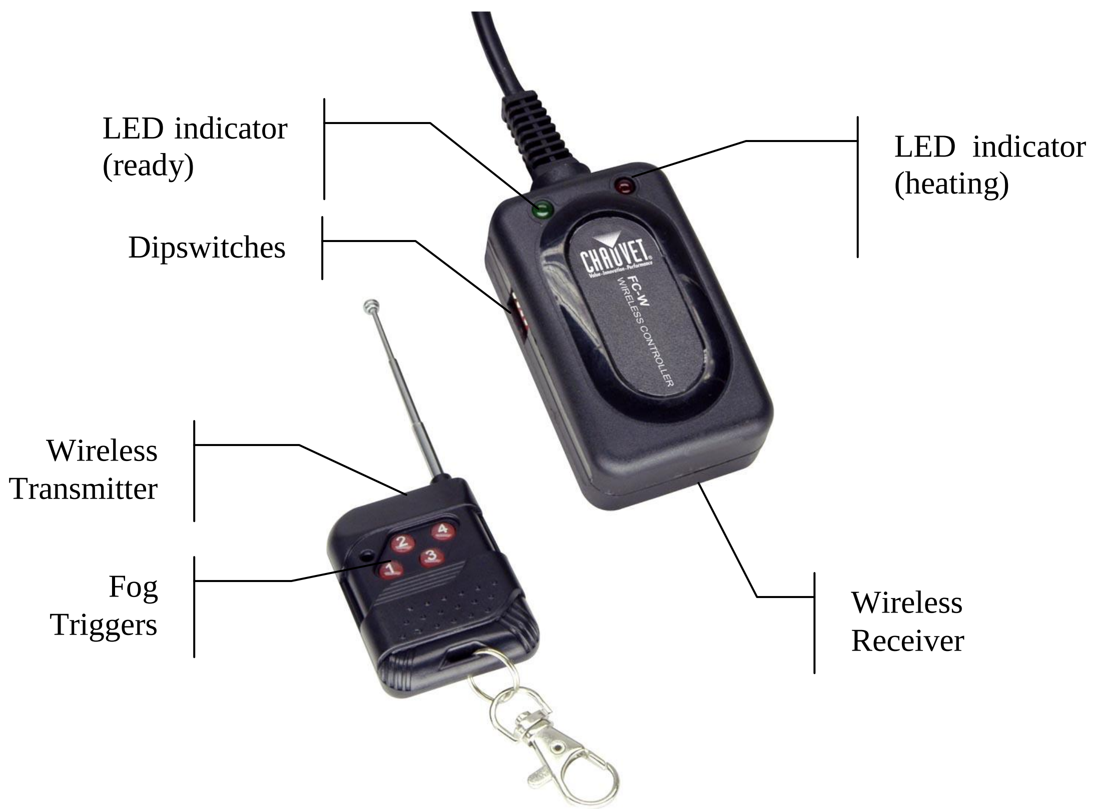
Wireless Controller (FC-W) (Optional)

This mode will allow you to control the fogger using the optional wireless controller. This consists of the transmitter and the receiver. You may control up to 4 independent fog machines or many more if you run them simultaneously. See the below instructions on setting up your fogger to operate with the FC-W.

1. Plug the wires receiver into the fog machine 5-pin port labeled “Remote Control”.
2. There are 4 buttons on the wireless remote transmitter which act as triggers. Each button can be assigned to a different fog machine. You may only choose 1 dipswitch on each receiver. See the below configuration for setting the receivers to operate with the transmitter remote.

Mode	DIP Switches
CH1	1 = On, 2-4 = Off
CH2	2 = On, 1,3,4 = Off
CH3	3 = On, 1,2,4 = Off
CH4	4 = On, 1,2,3 = Off

3. Press the fog button, and the fog machine will output fog for as long as you hold down the button.



SETTING THE STARTING ADDRESS

This DMX mode enables the use of a universal DMX controller device. Each fixture requires a "start address" from 1 to 512. A fixture requiring one or more channels for control begins to read the data on the channel indicated by the start address. For example, a fixture that uses 6 DMX channels and was addressed to start on DMX channel 100, would read data from channels: 100, 101, 102, 103, 104, and 105. Choose start addresses so that the channels used do not overlap, and note the start address selected for future reference.

If this is your first time addressing a fixture using the DMX-512 control protocol, we suggest jumping to the Appendix Section and reading the heading “DMX Primer”. It contains very useful information that will help you understand its use.

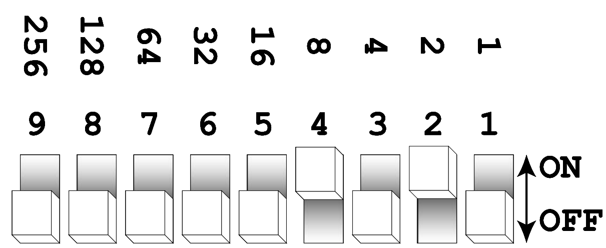
Set the start address using the group of DIP switches located usually on bottom of the fixture. Each dip switch has an associated value. Adding the value of each switch in the ON position will provide the start address. Figuring out which switches to toggle ON given a specific start address can be accomplished by determining which switch values will add up to the address value, and turning these switches on. Do so by doing the following:

1) Determine the largest value switch that is less than the start address. Turn this switch on.
2) Subtract the value of the switch you just turned on from the starting address number.
3) Determine the largest value switch that is less than the remainder from the previous subtraction. Turn this switch on.
4) Subtract the value of the switch you just turned on from the remainder of the previous subtraction.
5) Repeat steps three and four until you have a remainder of zero.

EXAMPLE STARTING ADDRESS

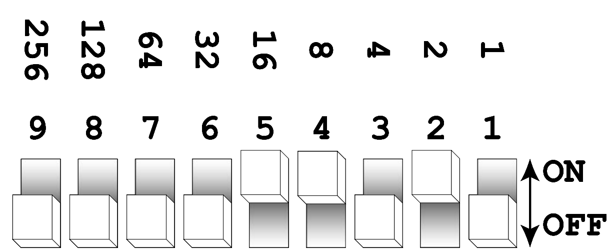
Address 10

Switch # 4 = 8
Switch # 2 = 2
Total = 10



Address 24

Switch # 5 = 16
Switch # 4 = 8
Total = 24



Resolving address using simple math.

Address 233

DIP SWITCH	(DMX VALUE)
1	1
2	2
3	4
4	8
5	16
6	32
7	64
8	128

233 – (128) = 105, Turn ON Dip # 8 105 – (64) = 41, Turn ON Dip # 7 41 – (32) = 9, Turn ON Dip # 6 9 – (8) = 1, Turn ON Dip # 4 1 – (1) = 0, Turn ON Dip # 1	**9**	256

DMX QUICK REFERENCE CHART

DMX Address Quick Reference Chart

DIP Switch Position

DMX DIP SWITCH SET					#9	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
0=OFF					#8	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1
1=ON					#7	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1
X=OFF or ON					#6	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
#1	#2	#3	#4	#5																	
0	0	0	0	0			32	64	96	128	160	192	224	256	288	320	352	384	416	448	480
1	0	0	0	0		1	33	65	97	129	161	193	225	257	289	321	353	385	417	449	481
0	1	0	0	0		2	34	66	98	130	162	194	226	258	290	322	354	386	418	450	482
1	1	0	0	0		3	35	67	99	131	163	195	227	259	291	323	355	387	419	451	483
0	0	1	0	0		4	36	68	100	132	164	196	228	260	292	324	356	388	420	452	484
1	0	1	0	0		5	37	69	101	133	165	197	229	261	293	325	357	389	421	453	485
0	1	1	0	0		6	38	70	102	134	166	198	230	262	294	326	358	390	422	454	486
1	1	1	0	0		7	39	71	103	135	167	199	231	263	295	327	359	391	423	455	487
0	0	0	1	0		8	40	72	104	136	168	200	232	264	296	328	360	392	424	456	488
1	0	0	1	0		9	41	73	105	137	169	201	233	265	297	329	361	393	425	457	489
0	1	0	1	0		10	42	74	106	138	170	202	234	266	298	330	362	394	426	458	490
1	1	0	1	0		11	43	75	107	139	171	203	235	267	299	331	363	395	427	459	491
0	0	1	1	0		12	44	76	108	140	172	204	236	268	300	332	364	396	428	460	492
1	0	1	1	0		13	45	77	109	141	173	205	237	269	301	333	365	397	429	461	493
0	1	1	1	0		14	46	78	110	142	174	206	238	270	302	334	366	398	430	462	494
1	1	1	1	0		15	47	79	111	143	175	207	239	271	303	335	367	399	431	463	495
0	0	0	0	1		16	48	80	112	144	176	208	240	272	304	336	368	400	432	464	496
1	0	0	0	1		17	49	81	113	145	177	209	241	273	305	337	369	401	433	465	497
0	1	0	0	1		18	50	82	114	146	178	210	242	274	306	338	370	402	434	466	498
1	1	0	0	1		19	51	83	115	147	179	211	243	275	307	339	371	403	435	467	499
0	0	1	0	1		20	52	84	116	148	180	212	244	276	308	340	372	404	436	468	500
1	0	1	0	1		21	53	85	117	149	181	213	245	277	309	341	373	405	437	469	501
0	1	1	0	1		22	54	86	118	150	182	214	246	278	310	342	374	406	438	470	502
1	1	1	0	1		23	55	87	119	151	183	215	247	279	311	343	375	407	439	471	503
0	0	0	1	1		24	56	88	120	152	184	216	248	280	312	344	376	408	440	472	504
1	0	0	1	1		25	57	89	121	153	185	217	249	281	313	345	377	409	441	473	505
0	1	0	1	1		26	58	90	122	154	186	218	250	282	314	346	378	410	442	474	506
1	1	0	1	1		27	59	91	123	155	187	219	251	283	315	347	379	411	443	475	507
0	0	1	1	1		28	60	92	124	156	188	220	252	284	316	348	380	412	444	476	508

1	0	1	1	1		29	61	93	125	157	189	221	253	285	317	349	381	413	445	477	509
0	1	1	1	1		30	62	94	126	158	190	222	254	286	318	350	382	414	446	478	510
1	1	1	1	1		31	63	95	127	159	191	223	255	287	319	351	383	415	447	479	511

DIP Switch Position DMX Address

General Troubleshooting

Symptom	Solution(s)	Applies to			
		Lights	Foggers & Snow	Controllers	Dimmers & Chaser
Loss of signal	Use only DMX cables Install terminator Note: Keep DMX cables separated from power cables or black lights.	✓	✓	✓	✓
Remote does not work	Make sure connector is firmly connected to device	✓	✓		

If you still have a problem after trying the above solutions, please contact CHAUVET® Technical Support at the location listed below.

Technical Support

Address: Service Dept.
3000 N 29th Ct, Hollywood, FL 33020 (U.S.A.)
Support (Email): tech@chauvetlighting.com
Telephone: (954) 929-1115 - (Press 4)
Fax: (954) 929-5560 - (Attention: Service)
Website: http://www.chauvetlighting.com

5. APPENDIX

DMX Primer

There are 512 channels in a DMX-512 connection. Channels may be assigned in any manner. A fixture capable of receiving DMX 512 will require one or a number of sequential channels. The user must assign a starting address on the fixture that indicates the first channel reserved in the controller. There are many different types of DMX controllable fixtures and they all may vary in the total number of channels required. Choosing a start address should be planned in advance. Channels should never overlap. If they do, this will result in erratic operation of the fixtures whose starting address is set incorrectly. You can however, control multiple fixtures of the same type using the same starting address as long as the intended result is that of unison movement or operation. In other words, the fixtures will be slaved together and all respond exactly the same.

DMX fixtures are designed to receive data through a serial Daisy Chain. A Daisy Chain connection is where the DATA OUT of one fixture connects to the DATA IN of the next fixture. The order in which the fixtures are connected is not important and has no effect on how a controller communicates to each fixture. Use an order that provides for the easiest and most direct cabling. Connect fixtures using shielded two conductor twisted pair cable with three pin XLR male to female connectors. The shield connection is pin 1, while pin 2 is Data Negative (S-) and pin 3 is Data positive (S+).

WARNING!

- **Note**: All fog machines are prone to clogging due to the thick consistency of fog liquid and the high temperature at which it vaporizes. However, a properly maintained fog machine should provide years of reliable use. Cleaning your fog machine regularly will help reduce costly replacement and repair charges.

Maintenance

Do not allow the fog machine to become contaminated. After every 40 hours of continuous operation, it is recommended to run a cleaning solution composed of 80% distilled water and 20% distilled vinegar through the system to prevent the accumulation of particulate matter in the heating element.

The recommended cleaning regimen is as follows:

1. Empty all fog liquid from the machine. Add cleaning solution to tank. Plug unit in and begin warm up.
2. Run the unit in a well-ventilated area until the tank is almost empty. Do not allow the pump to run dry.
3. Replace nozzle.
4. Cleaning is now complete. Refill with fog liquid. Run the machine briefly to clear any cleaning solution from the pump and heater.
5. Do not operate the machine without liquid at any time.

Storage

1. When storing run distilled water (not tap water) through the system as described in the cleaning regiment above. This will help avoid any particles condensing inside the pump or heater.
2. It is strongly recommended to test-run the machine on a monthly basis in order to achieve its best fogging condition.

Caution:

1. Never place the fog/hazer machine on any flammable material (i.e. carpet, fabric etc.) during operation. All fog/hazer machines should always be on a non-flammable surface, such as concrete or tile.
2. Depending on the amount of fog/haze generated, all fog machines may set off smoke detectors.

Returns Procedure

Returned merchandise must be sent prepaid and in the original packing, call tags will not be issued. Package must be clearly labeled with a Return Merchandise Authorization Number (RMA #). Products returned without an RMA # will be refused. Call CHAUVET® and request RMA # prior to shipping the fixture. Be prepared to provide the model number, serial number and a brief description of the cause for the return. Be sure to properly pack fixture, any shipping damage resulting from inadequate packaging is the customer's responsibility. CHAUVET® reserves the right to use its own discretion to repair or replace product(s). As a suggestion, proper UPS packing or double-boxing is always a safe method to use.

Note: If you are given an RMA #, please include the following information on a piece of paper inside the box:

1) Your name
2) Your address
3) Your phone number
4) The RMA #
5) A brief description of the symptoms

Claims

Damage incurred in shipping is the responsibility of the shipper; therefore the damage must be reported to the carrier upon receipt of merchandise. It is the customer's responsibility to notify and submit claims with the shipper in the event that a fixture is damaged due to shipping. Any other claim for items such as missing component/part, damage not related to shipping, and concealed damage, must be made within seven (7) days of receiving merchandise.

Contact Us

World Wide

General Information

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Hollywood, FL 33020
voice: 954.929.1115
fax: 954.929.5560
toll free: 800.762.1084

Technical Support

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3000 North 29th Court
Hollywood, FL 33020
voice: 954.929.1115 **(Press 4)**
fax: 954.929.5560 **(Attention: Service)**

World Wide Web www.chauvetlighting.com

Technical Specifications

WEIGHT & DIMENSIONS
Length....26 in (585 mm)
Width....13.6 in (347 mm)
Height....14.7 in (374 mm)
Weight....27.6 lbs (12.5 kg)

POWER
AC power (voltage specific)....115 VAC, 60 Hz or 230 VAC, 50Hz
Breaker size (120 V version)....15 A, 125 V
Power Consumption....1,364 W (11.9 A) max @ 120 V
Inrush current....(11.7 A) @ 120 V
Power Factor....0.99 @ 120 V
Breaker size (230 V version)....8 A, 250 V
Power Consumption....1,350 W (5.86 A) max @ 230 V
Inrush current....(6 A) @ 230 V
Power Factor....0.99 @ 230 V
Output....25,000 cfm
Fluid consumption....125 ml/min

THERMAL
Maximum ambient temperature....104° F (40° C)

CONTROL & PROGRAMMING
Data input....locking 3-pin XLR male socket
Data output....locking 3-pin XLR female socket
Data pin configuration (3-pin)....pin 1 shield, pin 2 (-), pin 3 (+)
Data input....locking 5-pin XLR male socket
Data output....locking 5-pin XLR female socket
Data pin configuration (5-pin)....pin 1 shield, pin 2 (-), pin 3 (+), pin 4 (not used), pin 5 (not used)
Protocols....DMX-512 USITT
DMX Channels....1

ORDERING INFORMATION
Hurricane™ 1800 Flex....HURRICANE1800FLEX

WARRANTY INFORMATION
Warranty....1-year limited warranty